



US009637004B2

(12) **United States Patent**
Johansson et al.

(10) **Patent No.:** **US 9,637,004 B2**
(45) **Date of Patent:** **May 2, 2017**

(54) **SYSTEM AND METHOD FOR DELIMITING
REGENERATIVE BRAKING**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 16 days.

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(21) Appl. No.: **14/743,135**

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(22) Filed: **Jun. 18, 2015**

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(65) **Prior Publication Data**

US 2016/0368384 A1 Dec. 22, 2016

(57) **ABSTRACT**

(51) **Int. Cl.**
B60L 7/18 (2006.01)
B60T 8/1752 (2006.01)
B60L 3/10 (2006.01)
(52) **U.S. Cl.**
CPC **B60L 7/18** (2013.01); **B60L 3/102**
(2013.01); **B60T 8/1752** (2013.01); **B60T**
2270/613 (2013.01); **Y10S 903/947** (2013.01)
(58) **Field of Classification Search**
CPC G06G 7/76; G05D 1/00; B60L 7/18; B60L
3/102; B60T 8/1752; B60T 2270/613;
Y10S 903/947
See application file for complete search history.

The present disclosure relates to a method for controlling an
application of regenerative brake torque to a plurality of
wheels of at least one of a hybrid electric vehicle or an
electric vehicle, to avoid brake instability. The method may
involve sensing variables such as an angle of a steering
wheel of the vehicle, a speed of the vehicle, a brake pedal
rate as an operator engages a brake pedal, and a wheel slip
of each of the front and rear wheels. A commanded lateral
acceleration may be determined representing a steady state
lateral acceleration that the vehicle would reach at an actual
vehicle speed and with a presently sensed steering wheel
angle. The application of regenerative brake torque can then
be controlled based on the sensed wheel slips relative to at
least one predetermined wheel slip limit. The predetermined
wheel slip limit is determined based at least in part on the
determined commanded lateral acceleration.

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20 Claims, 9 Drawing Sheets

